SCIENCE ABSTRACTS.

SECTION A.—PHYSICS.

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ERRATA.

Section A.—PHYSICS.

Yearly Name Index, 1923, p. 1029, line 19, Chemical Constant of Hydrogen, 2467, the author should be F. Simon.

1924.

Abstract No. 107, line 1, should read "lengths of *a*-Rays."
Abstract No. 172, line 1: *for* Q. Majorana, *read* S. Magrini; and line 3: *for* Ann. Chem. Phys., etc., *read* Abstract 616 (1904).
Abstract No. 298, line 1: *for* C. E. Laue, *read* C. E. Lane.
Abstract No. 475, line 1: *for* O. E. Mourashkinsky, *read* B. E. Mourashkinsky.
Abstract No. 596, line 1: *for* Enwright, *read* Enright.
Abstract No. 1376, line 2: *for* Bikowski, *read* Bokowski.
Abstract No. 1567, line 1: *for* Wasik, *read* Waszik.
Abstract No. 2051, line 1: *for* Moffit, *read* Moffitt.
Abstract No. 2324, line 2: *for* 43, *read* 44.
Abstract No. 2395, line 2: *for* Picou, *read* Picon.
Abstract No. 2398, line 1: *for* H. C. Deming, *read* H. G. Deming.
Abstract No. 2576, line 2: *for* A. Schaefer, *read* C. Schaefer.

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ACCESSION
No. 9239

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LIST OF JOURNALS & ABBREVIATIONS USED THEREFOR

An asterisk (*) indicates that the Journals so marked were received only occasionally.

ABBREVIATION.	FULL TITLE.
Accad. Lincei, Atti	Atti della Reale Accademia dei Lincei, Roma.
*Accad. Sci. Med. e. Nat., Ferrara	Accademia della Scienze Medicale et Naturale, Ferrara.
Accad. Sci. Torino, Atti	Atti della Reale Accademia delle Scienze di Torino.
A.C.E.C.	A.C.E.C.
*Aeronaut. Research Inst. Imp. Univ., Tokyo, Report	Report of the Aeronautical Research Institute of the Imperial University, Tokyo.
Akad. Wiss. Wien, Ber.	Sitzungsberichte der Akademie der Wissenschaften, Wien, Mathematischnaturwissenschaftliche Klasse.
Am. Acad., Proc.	Proceedings of the American Academy of Arts and Sciences.
Am. Chem. Soc., J.	Journal of the American Chemical Society.
Am. Electrochem. Soc., Trans.	Transactions of the American Electrochemical Society.
Am. Illum. Eng. Soc., Trans.	Transactions of the American Illuminating Engineering Society.
Am. I.E.E., J.	Journal of the American Institute of Electrical Engineers.
Am. Inst. Mining Eng., Trans.	Transactions of the American Institute of Mining Engineers.
Am. J. Sci.	American Journal of Science.
Am. Phil. Soc., Proc.	Proceedings of the American Philosophical Society.
*Am. Soc. for Testing Mat.	American Society for Testing Materials.
Am. Soc. Mech. Eng., J.	Journal of the American Society of Mechanical Engineers (now Mechanical Engineering).
*Ann. de l'Obs. Astron. de Tokyo	Annales de l'Observatoire Astronomique de Tokyo.
Ann. de Physique	Annales de Physique.
Ann. d. Physik	Annalen der Physik.
Annales des Postes, Télé.	Annales des Postes, Télégraphes et Téléphones.
Arch. d'El. Médicale	Archives d'Électricité Médicale.
Arch. des Sciences	Archives des Sciences Physiques et Naturelles, Genève.
Archiv f. Elektrot.	Archiv für Elektrotechnik.
*Arkiv f. Kem. Min. o. Geologie, Stockholm	Arkiv för Kemi, Mineralogi och Geologie, Stockholm.
Ark. f. Mat. Astron. och Fysik, Stockholm	Arkiv för Matematik, Astronomie och Fysik, Stockholm.
Assoc. Ing. El. Liége, Bull.	Association des Ingénieurs Electriciens. Bulletin, Institut Electrotechnique Montefiore, Liége.
*Astron. Iakttagelser och Undersökningar, Stockholm	Astronomiska Iakttagelser och Undersökningar à Stockholm's Observatorium.
Astron. J.	Astronomical Journal.
*Astron. Nachr.	Astronomische Nachrichten.
*Astron. Soc. Pacific, Publ.	Publications of the Astronomical Society of the Pacific.
*Astronomie	L'Astronomie.
Astrophys. J.	Astrophysical Journal.
*Audion	L'Audion.
Automotor J.	Automotor Journal.
Bell System Techn. J.	Bell System Technical Journal.
*Boletim Meteorologico	Boletim Meteorologico.
Brit. J. of Radiology	British Journal of Radiology.
*British Non-Ferrous Metals Research Assoc., Bull.	Bulletin of the British Non-Ferrous Metals Research Association.
Brown Boveri Rev.	Brown Boveri Review.
Bull. Astronomique	Bulletin Astronomique.

Abbreviation.	Full Title.
Bull. Oerlikon	Bulletin Oerlikon.
Bureau of Mines, Techn. or Sci. Papers	Technical or Scientific Papers of the Bureau of Mines (U.S. Department of the Interior).
Bureau of Standards, Bull.	Bulletin of the Bureau of Standards, Washington.
Calcutta Math. Soc., Bull.	Bulletin of the Calcutta Mathematical Society.
Cambridge Phil. Soc., Proc.	Proceedings of the Cambridge Philosophical Society.
Cambridge Phil. Soc., Trans.	Transactions of the Cambridge Philosophical Society.
Canad. Elect. News	Canadian Electrical News.
Chem. and Met. Eng.	Chemical and Metallurgical Engineering.
Chem. News	Chemical News and Journal of Physical Science.
Chem. Soc., J.	Journal and Proceedings of the Chemical Society of London.
Colliery Guardian	Colliery Guardian.
Comptes Rendus	Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences.
*Danske Vidensk. Selskabs., Med.	Meddelelser det kgl. danske Videnskabernes Selskabs.
*Dominion Obs. Ottawa, Publ.	Publications of the Dominion Observatory, Ottawa.
Elect. J.	Electric Journal.
Electrician	The Electrician.
El. Rly. and Tramway J.	Electric Railway and Tramway Journal.
Electrot. Laborat. Tokyo, Japan, Researches	Researches of the Electrotechnical Laboratory, Tokyo, Japan.
Elek. Betrieb	Der Elektrische Betrieb.
Elek. Nachrichten	Elektrische Nachrichten-technik.
Elek. u. Maschinenbau	Elektrotechnik und Maschinenbau.
Elekt. Zeits.	Elektrotechnische Zeitschrift.
Elettrotecnica	L'Elettrotecnica.
El. Rev.	The Electrical Review (London).
El. Times	Electrical Times.
El. World	Electrical World.
Engineer	Engineer.
Engineering	Engineering.
Engineers and Engineering	Engineers and Engineering.
Experimental Wireless	Experimental Wireless.
Faraday Soc., Trans.	Transactions of the Faraday Society.
Frank. Inst., J.	Journal of the Franklin Institute.
*Fuel Research Board, Tech. Paper	Technical Papers of the Fuel Research Board.
Gen. El. Rev.	General Electric Review.
Geofysiske Publ.	Geofysiske Publikationer.
Harvard Coll. Obs., Bull.	Bulletin of the Harvard College Observatory.
Harvard Coll. Obs., Circ.	Circular of the Harvard College Observatory.
Illum. Eng., London	Illuminating Engineer.
Imp. Marine Obs. Kobe, Japan, Mem.	Memoirs of the Imperial Marine Observatory Kobe, Japan.
Indian Assoc. for Cultivation of Science, Proc.	Proceedings of the Indian Association for Cultivation of Science.
Indust. and Engin. Chem.	Industrial and Engineering Chemistry.
Inst. Civ. Eng., Proc.	Proceedings of the Institution of Civil Engineers.
Inst. El. Eng., J.	Journal of the Institution of Electrical Engineers.
Inst. El. Eng. of Japan, J.	Journal of the Institution of Electrical Engineers of Japan.
Inst. Eng. and Shipbuilders, Trans.	Transactions of the Institution of Engineers and Shipbuilders in Scotland.
Inst. Mech. Eng., Proc.	Proceedings of the Institution of Mechanical Engineers.
Inst. Naval Architects, Trans.	Transactions of the Institution of Naval Architects.
Inst. of Metals, J.	Journal of the Institute of Metals.
Inst. Radio Eng., Proc.	Proceedings of the Institute of Radio Engineers.
*Iowa Acad. Sci., Proc.	Proceedings of the Iowa Academy of Science.
Iron and Steel Inst., J.	Journal of the Iron and Steel Institute.

Abbreviation.	Full Title.
Jahrb. d. drahtl. Tele.	Jahrbuch der Drahtlosen Telegraphie und Telephonie (now Zeitschrift für Hochfrequenztechnik).
*Jahrb. d. Radioakt.	Jahrbuch der Radioaktivität und Elektronik.
*Japanese J. of Chem.	Japanese Journal of Chemistry.
Japanese Journ. Phys.	Japanese Journal of Physics.
J. de Physique et le Radium	Le Journal de Physique et le Radium.
J. Math. Phys., Mass. Inst. of Technology	Journal of Mathematics and Physics, Massachusetts Institute of Technology.
J. Phys. Chem.	Journal of Physical Chemistry.
Journ. Sci. Instruments	Journal of Scientific Instruments.
Journ. Télégraph.	Journal Télégraphique.
K. Akad. Amsterdam, Proc.	Proceedings of the Koninklijke Akademie van Wetenschappen te Amsterdam.
*Kansas Univ. Sci. Bull.	Bulletin of the Kansas University of Science.
*K. Ventenskapsakad. Nobelinst., Stockholm, Medd.	Meddelanden från K. Vetenskapsakademiens Nobelinstitut, Stockholm.
Kyoto Coll. Sci., Mem.	Memoirs of the College of Science, Kyoto Imperial University.
Kyushu Univ. Coll. Eng., Mem.	Memoirs of the Kyushu Imperial University College of Engineering.
Lick Observat., Bull.	Bulletin of the Lick Observatory.
Manchester Phil. Soc., Mem.	Memoirs and Proceedings of the Manchester Literary and Philosophical Society.
Mechanical Engineering	Mechanical Engineering (Am. Soc. M.E.).
*Meteorolog. Obs. Japan, Bull.	Bulletin of the Meteorological Observatory, Japan.
Meteorolog. Office, Prof. Notes	Professional Notes of the Meteorological Office.
Meteorolog. Zeits.	Meteorologische Zeitschrift.
Monthly Weather Rev.	Monthly Weather Review.
Nat. Acad. Sci., Proc.	Proceedings of the National Academy of Sciences.
*Nat. Research Council, Bull.	Bulletin of the National Research Council.
Nature	Nature.
N. Cimento	Nuovo Cimento.
New Zealand J. of Sci.	New Zealand Journal of Science and Technology.
Observatory	The Observatory.
Onde Elec.	L'Onde Electrique.
Optical Soc. America, J., and Rev. Sci. Inst.	Journal of the Optical Society of America and Review of Scientific Instruments.
Optical Soc., Trans.	Transactions of the Optical Society.
Phil. Mag.	Philosophical Magazine and Journal of Science.
Phot. J.	Photographic Journal.
Phys. Math. Soc. Japan, Proc.	Proceedings of the Physico-Mathematical Society of Japan.
Phys. Rev.	Physical Review.
Phys. Soc., Proc.	Proceedings of the Physical Society of London.
Phys. Zeits.	Physikalische Zeitschrift.
Post Office Elect. Eng., J.	Post Office Electrical Engineers' Journal.
Power	Power.
Preuss. Akad. Wiss. Berlin, Ber.	Sitzungsberichte der Preussischen Akademie der Wissenschaften zu Berlin.
*Puget Sound Biolog. Station, Publ.	Publications of the Puget Sound Biological Station.
*R. Accad. Navale Livorno, Boll. Radiotelegrafico.	Reale Accademia Navale Livorno, Bolletino Radiotelegrafico.
Radioélectricité	Radioélectricité.
Radio Rev.	Radio Review (now Wireless World and Radio Review).
*Rec. des Trav. Chim. des Pays Bas	Receuil des Travaux Chimiques des Pays Bas.
Rev. de Mét.	Revue de Métallurgie.
Rev. d'Optique	Revue d'Optique Théorique et Instrumentale.
Rev. Gén. d'El.	Revue Générale de l'Électricité.
*Riv. Ottica e Meccan.	Rivista d'Ottica e Meccanica di Precisione.
Roy. Astron. Soc. Canada, J.	Journal of the Royal Astronomical Society of Canada.
Roy. Astron. Soc., M.N.	Monthly Notices of the Royal Astronomical Society.

Abbreviation.	Full Title.
Roy. Dublin Soc., Proc.	Proceedings of the Royal Dublin Society.
Roy. Inst., Proc.	Proceedings of the Royal Institution of Great Britain.
Roy. Irish Acad., Proc.	Proceedings of the Royal Irish Academy.
Roy. Meteorolog. Soc., J.	Quarterly Journal of the Royal Meteorological Society.
Roy. Soc. Arts, J.	Journal of the Royal Society of Arts.
Roy. Soc. Canada, Trans.	Transactions of the Royal Society of Canada.
Roy. Soc. Edinburgh, Proc.	Proceedings of the Royal Society of Edinburgh.
Roy. Soc., Phil. Trans.	Philosophical Transactions of the Royal Society of London.
Roy. Soc., Proc.	Proceedings of the Royal Society of London.
Roy. Soc. Tasmania, Proc.	Proceedings of the Royal Society of Tasmania.
Roy. Soc. Victoria, Proc.	Proceedings of the Royal Society of Victoria.
Schweiz. Elektrot. Verein, Bull.	Bulletin des Schweizerischen Elektrotechnischen Vereins.
Science	Science.
*Sci. Assoc. Maharajah's Coll., Vizianagaram J.	Journal of the Science Association of the Maharajah's College, Vizianagaram.
Sci. Monthly	The Scientific Monthly.
*Smithsonian Misc. Coll.	Smithsonian Miscellaneous Collections.
Soc. Belge Elect., Bull.	Bulletin de la Société Belge des Électriciens.
*Soc. Chim. Pologne, Ann.	Roczniki Chemji, Warszawa.
Soc. Franç. Élect., Bull.	Bulletin de la Société Française des Électriciens.
*Soc. Spettros. Ital., Mem.	Memorie della Società degli Spettroscopisti Italiani.
S. African Inst. El. Eng., Trans.	Transactions of the South African Institute of Electrical Engineers.
*Teknisk Tidskrift	Teknisk Tidskrift.
Teleg. u. Fernspr. Techn	Telegraphen und Fernsprech Technik.
Terrest. Magn.	Terrestrial Magnetism and Atmospheric Electricity.
Tôhoku Math. J.	Tôhoku Mathematical Journal.
Tôhoku Univ., Sci. Reports	Science Reports of the Tôhoku Imperial University.
Tokyo Univ. Coll. of Eng., J.	Journal of the Tokyo Imperial University College of Engineering.
T. S. F.	Télégraphie sans Fil: Revue Mensuelle de Radiotélégraphie et Radiotéléphonie.
Union Obs. S. Africa, Circ.	Circular of the Union Observatory of South Africa.
Univ. of Durham Phil. Soc., Proc.	Proceedings of the University of Durham Philosophical Society.
Univ. of Illinois Eng. Exp. Sta., Bull.	Bulletin of the Engineering Experiment Station of the University of Illinois.
Washington Acad. Sci., J.	Journal of the Washington Academy of Sciences.
Wireless Age	Wireless Age.
Wireless World and Radio Rev.	Wireless World and Radio Review.
World Power	World Power (formerly Beama).
*Yerkes Observat., Publ.	Publication of the Yerkes Observatory.
*Zeits. angew. Chem.	Zeitschrift für angewandte Chemie.
*Zeits. anorg. Chem.	Zeitschrift für anorganische Chemie.
Zeits. Elektrochem.	Zeitschrift für Elektrochemie.
Zeits. f. Hochfrequenztechn.	Zeitschrift für Hochfrequenztechnik.
Zeits. f. Metallkunde	Zeitschrift für Metallkunde (formerly Internationale Zeitschrift für Metallographie).
Zeits. f. Physik	Zeitschrift für Physik.
Zeits. Instrumentenk.	Zeitschrift für Instrumentenkunde.
Zeits. Math. u. Mechanik	Zeitschrift für angewandte Mathematik und Mechanik.
Zeits. phys. Chem.	Zeitschrift für physikalische Chemie.
Zeits. techn. Physik.	Zeitschrift für technische Physik.
Zeits. Vereines deutsch. Ing.	Zeitschrift des Vereines deutscher Ingenieure.
Zeits. wiss. Phot.	Zeitschrift für wissenschaftliche Photographie, Photophysik und Photochemie.